UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,187	07/15/2003	Dennis G. Thibedeau	66396-049	4957

	7590	12/06/2005

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EXAMINER
TERESINSKI, JOHN

ART UNIT	PAPER NUMBER
2858	

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/619,187	THIBEDEAU ET AL.
	Examiner	Art Unit
	John Teresinski	2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>22 September 2005</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-7 and 29-32</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-7 and 29-32</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1,2,5,7 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent Publication No. 2003/0017753 to Palmisano et al. in view of U.S. Patent No.

6,097,193 to Bramwell.

Regarding claim 1, Palmisano et al. disclose a testing device having a system tester with

load leads connectable at respective first ends to separate points of an electrical system

circuit/battery clamp and connectable at respective second ends to a first set of inputs to the

tester (Fig. 7-1 elements 708B, 710B), sense leads connectable at respective first ends to the

separated points of the vehicle system circuit and connectable at respective second ends to a

second set of inputs to the tester (Fig. 7-1 elements 708A, 710A), a controller (720) for

measuring the conductance between the circuit points and calculating data related thereto

(paragraph 30), and display means (728) for displaying in real time the impedance as measured

(paragraph 29). Palmisano et al. fails to teach the testing device for a vehicle system circuit.

Bramwell discloses a vehicle battery meter and associated method including a system tester with

load leads connectable to separate points of the vehicle system circuit (Fig. 1 elements A-D). It

would have been obvious to one of ordinary skill in the art at the time the invention was made to

include testing a vehicle system circuit as taught by Bramwell into Palmisano et al. as it is very

useful to determine circuit parameters and troubleshooting electrical problems in vehicle

components such as batteries to accurately determine component defects (column 1 lines 23-30).

Regarding claim 2, Palmisano et al. disclose an electrical source connectable to the load

circuit element (Fig. 7-12 element 712), but fails to disclose a load circuit element is connected

across the load leads. Bramwell discloses a load circuit element (Rx) is connected across the

load leads, and the system tester further comprises an electrical source connectable to the load

circuit element (Fig. 1 elements Rx, 28). It would have been obvious to one of ordinary skill in

the art at the time the invention was made to include a load circuit element to determine circuit

specific qualities such as battery conductance based on a battery rating.

Regarding claim 5, Palmisano et al. discloses means for calculating

impedance/conductance values for a plurality of circuit points at which the load leads and sense

leads may be connected and means for comparing the calculated impedance values with

respective threshold values (paragraphs 30 and 31).

Regarding claims 7 and 29, Palmisano et al. disclose a pair of conductors attached at a

first end to a Kelvin clamp, the pair of conductors attached at a second end to respective

terminals of a terminal block, the terminals being insulated from each other, wherein the terminal

block is configured for mating to a Kelvin clamp of the testing device (paragraphs 18 and 28).

Regarding claims 30 and 31, Palmisano et al. disclose the value of conductance as

measured at various circuit points are displayed continuously in real time (paragraph 29), the

controller calculates data related to the circuit points and the display means displays a parameter

based on the related data calculated by the controller (paragraph 29).

Regarding claim 32, Palmisano et al. disclose displaying measured values (paragraph 29) but fails to disclose the controller calculating an available cranking current based on the impedance conductance or admittance. Bramwell disclose the controller calculating an available cranking current based on the impedance conductance or admittance (column 2 lines 30-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include to include the controller calculating an available cranking current based as taught by Bramwell into Palmisano et al. for the purpose of indicating longevity of a device under test.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmisano et al. and Bramwell as applied to claims 1 and 2 above, and further in view of U.S. Patent No. 6,172,505 to Bertness.

Regarding claims 3 and 4, Palmisano et al. disclose an alternating current source and the tester further having a current sense amplifier connected to the load leads (paragraph 29). Palmisano et al. as modified does not disclose a dc voltage amplifier and an ac amplifier connected to the sense leads, each of the amplifiers connected to a respective input channel of an analog to digital converter. Bertness discloses battery tester with a kelvin probe (16A, 16B, 18A, 18B) having a current sense amplifier connected to the load leads, a dc voltage amplifier (32) and an ac amplifier (24) connected to the sense leads, each of the amplifiers connected to a respective input channel of an analog to digital converter wherein the analog to digital converter output is applied to a controller (column 3 lines 23-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include current sense amplifiers as

taught by Bertness into Palmisano et al. as modified for the purpose of providing a measurement results with increased accuracy.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palmisano et al. and Bramwell as applied to claim 1 above, and further in view of U.S. Patent No. 6,384,614 to Hager et al..

Regarding claim 6, Palmisano et al. disclose sense leads provide Kelvin connections at points of the vehicle system circuit under test (paragraph 28). Palmisano et al. as modified does not disclose means for extending the length of the load lead and the sense lead connectable to a circuit point under test. Hager et al. disclose a kelvin probe for measuring resistance including means for extending the length of the load lead and the sense lead connected to a circuit under test (Fig. 1 elements 20 and 22, Fig. 2 element 88). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include means for extending the length of the load lead and the sense lead as taught by Hager et al. into Palmisano et al. as modified for the purpose of simplifying connection of test probes to test surfaces.

Response to Arguments

Applicant's arguments with respect to claims 1-7 and 29 have been considered but are moot in view of the new ground(s) of rejection.
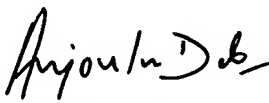
Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to John Teresinski whose telephone number is (571) 272-2235. The

examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JT
December 1, 2005

ANJAN DEB
PRIMARY EXAMINER